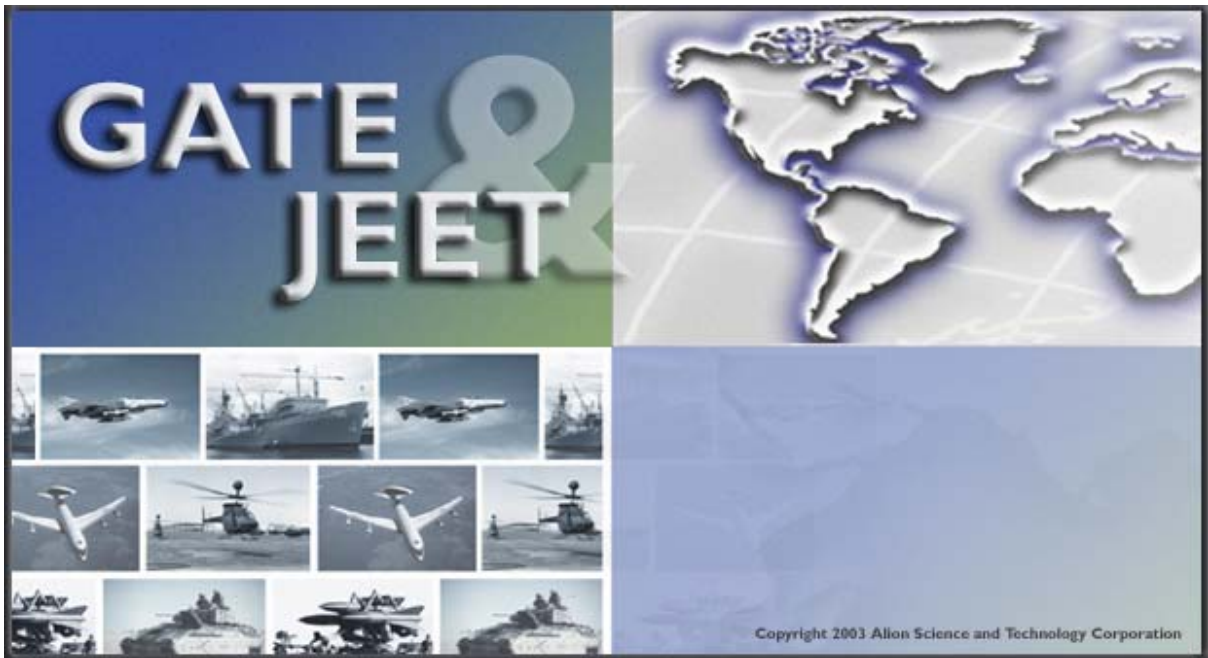


Training Course



GATE Version 4.2 and JEET Version 3.1.01

Hands-on training and theory designed to provide the skills and information required to perform GATE and JEET analyses.

-
- **OVERVIEW**
 - **COURSE CONTENT**
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 - **LOCATION**
 - **DATES & TIME**
 - **DIRECTIONS**
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OVERVIEW

Graphical Analysis Tool for Electromagnetic Environments (EMEs) (GATE) and Joint Electromagnetic Environmental Effects (E3) Evaluation Tool (JEET) are PC Microsoft Windows-based tools that examine the potential for electromagnetic interference (EMI) between a system of interest and the equipment's electromagnetic environment. Each quickly identifies the environmental equipment capable of producing an EMI interaction with the system of interest and the conditions under which that EMI is likely to occur.

GATE uses electronic and design parameters for the system under test and performs an analysis using an EME, from the Frequency Environmental (FE) database, comprised of frequency assignment data.

GATE data is provided by the Frequency Assignment Retrieval System (FARS) application, and from the NTIA Government Master File (GMF). FARS enables the user to query the FE data based on a geographical location, frequency, or field(s) in the FARS database, and generate a database in a Standard Frequency Action Format (SFAF) text file, easily importable into GATE. (SFAF is the file format compatible with programs like SPECTRUM XXI).

The following types of assignment data are provided in the FARS application:

- Frequency Resource Record System (FRRS) - 160,000 DoD frequency assignments
- Federal Communications Commission (FCC) File - 5,285,099 frequency assignments of the U.S. private sector, state and local governments
- International Telecommunications Union (ITU) data - 1,727,000 world-wide frequency assignments.

GATE can perform an interference-to-noise (I/N) ratio, Signal-to-interference (S/I), power density, or line-of-sight contour analysis. These analyses produce a list of equipment that can cause interference or exceed a specific susceptibility level. These potential EMI interactions are displayed in a tabular form with additional information provided to quantify the interaction graphically on a feature display map. GATE can also perform a line-of-sight contour analysis and analyze equipment moving in a track pattern. In addition, graphs are provided detailing the recommended distance and frequency separation required to preclude EMI for all values of off tuning between the interferer and victim receiver.

JEET also uses electronic and design parameters for the system under test; however, JEET performs an analysis using an EME, from the Equipment Characteristics and Space (EC/S) database, composed of nearly 40,000 systems including DoD, US government and select civilian and foreign equipment. In addition, JEET allows the user to import or design a generic or operationally based laydown, to mirror any imaginable operational employment of the system.

JEET can perform either an I/N ratio or power density analysis. These analyses produce a list of equipment that can cause interference or exceed a specific susceptibility level. These potential EMI interactions are displayed in a tabular form with additional information provided to quantify the interaction. In addition, graphs are provided detailing the distance separation required to preclude EMI for all values of off tuning between the interferer and victim receiver.

COURSE CONTENT

I. JEET Introduction and Background

1. JEET Environmental Data
2. Overview of the JEET Capabilities
3. User-entered input parameters for system of interest
4. Output parameters

II. How to Use JEET Software Version 3.1.01

1. Problem #1 – Explore the JEET Graphical User Interface and perform an Interference-to-Noise analysis
2. Problem #2 – Create a Scenario Environment and perform a Power Density analysis
3. Viewing the data using Access

III. GATE Introduction and Background

1. GATE Data
2. Overview of the GATE Capabilities
3. User-entered input parameters for system of interest
4. Output parameters

IV. How to Use GATE Software Version 4.2

1. Problem 1 – Query and generate an FE database using FARS
2. Problem 2 – Setup topographical data files using the TopoMan Setup Utility
3. Problem 3 – Setup and run an I-to-N analysis
4. Problem 4 – Perform an LOS analysis
5. Problem 5 – Explore the Feature Display window
6. Problem 6 – Perform an S-to-I analysis

AGENDA AT A GLANCE

9:00	-	9:45	Introduction and Overview of JEET capabilities
9:45	-	10:00	Break
10:00	-	11:00	Hands-on Tutorial
11:00	-	11:15	Questions Answers
11:15	-	12:00	Break for lunch
12:00	-	1:00	Introduction and Overview of GATE capabilities
1:00	-	2:00	Hands on Tutorial
2:15	-	2:30	Break
2:30	-	3:45	Hands-on Tutorial (Continued)
3:45	-	4:00	Questions and Answers

LOCATION

Alion Science and Technology
185 Admiral Cochrane Drive
Annapolis, MD 21401

TIME & DATES

Classes will run from 9:00 A.M. to 4:00 P.M. on the following days:

- Feb 3
- Apr 4 – Apr 8 (E3 Conference, Las Vegas, NV)
- July 21

DIRECTIONS TO Alion Science and Technology

From Baltimore Washington International (BWI) Airport:

Start going towards the **AIRPORT EXIT** on **METROPOLITAN BLVD**. Continue towards **ANNAPOLIS (I-97)/BAY BRIDGE**, exit #1. Continue on **AVIATION BLVD**. Turn Left on **DORSEY RD**. Take the **I-97 SOUTH/MD-3 SOUTH** ramp towards **ANNAPOLIS/BAY BRIDGE**. Continue with I-97 directions.

From I-97:

Merge on **I-97 SOUTH**. Take the **MD-665 SOUTH** exit. Merge on **MD-665 SOUTH**. Take the **RIVA RD** exit, #22. Turn Right on **RIVA RD**. At the first light, turn left on **ADMIRAL COCHRANE DR**.

From Reagan International Airport (Washington D.C.):

Start going towards the **AIRPORT EXIT** on **B C ARRIVALS/BAG CLAIM**. Continue on **AIRPORT EXIT** towards **WASHINGTON**. Merge on the highway. Take the **I-395 NORTH/US-1 NORTH** exit towards **WASHINGTON**. Merge on **I-395 NORTH** towards **BALTIMORE/NEW YORK**. Continue on **I-295 SOUTH**. Continue on **SOUTHEAST FWY**. Take the **PENNSYLVANIA AVENUE** exit. Bear Right on **JOHN PHILIP SOUSA BRG/PENNSYLVANIA AVE SE**. Continue on **PENNSYLVANIA AVE SE**. Turn Left to take the **DC-295 NORTH** ramp. Merge on **DC-295 NORTH**. Continue on **MD-295 NORTH**. Take the **US-50 EAST** exit towards **ANNAPOLIS**. Merge on **US-50 EAST**. Follow the directions from **US-50 EAST**.

From Washington D.C. (Georgetown):

Head North on **WISCONSIN AVE NW**. Turn Left on **Q ST NW**. Continue on **MASSACHUSETTS AVE NW**. Continue on **SCOTT CIR NW**. Continue on **MASSACHUSETTS AVE NW**. Continue on **THOMAS CIR NW**. Turn Right on **MASSACHUSETTS AVE NW**. Continue on **MT VERNON PL NW**. Bear Left on **NEW YORK AVE NW**. Continue on **NEW YORK AVE NE**. Take the **US-50 EAST** exit towards **ANNAPOLIS**. Follow directions from **US-50 EAST**.

From 495 Beltway (Northern Virginia):

Continue on **I-495 INNERLOOP/I-495 EAST**. Continue on **I-95 SOUTH/I-495 INNERLOOP/I-495 SOUTH**. Take the **US-50 EAST** exit towards **ANNAPOLIS**, exit #19A. Merge on **US-50 EAST**. Follow directions from **US-50 EAST**.

From **US-50 EAST:**

Continue on **US-50 EAST/US-301 NORTH**. Take the **ARIS T ALLEN BLVD/RIVA RD** exit, exit **#22**. Merge on **MD-665 SOUTH**. Take the **RIVA RD** exit. Turn Right on **RIVA RD**. Turn Left on **ADMIRAL COCHRANE DR**.

ANNAPOLIS AREA HOTELS

For additional information and hotel rates see www.traveltoday.net



Courtyard by Marriott Annapolis
2559 Riva Road
Annapolis, MD USA 21401
(410) 266-1555 Toll-Free-Dial "1" & Then (800) 321-2211

The Courtyard by Marriott is **located within walking distance of Alion Science and Technology**. Business travelers designed the hotel. Courtyard surrounds you with all the conveniences that make business and pleasure travel easy.



Residence Inn by Marriott Annapolis
170 Admiral Cochrane Drive
Annapolis, MD USA 21401
Toll-Free-Dial "1" & Then (800) 331-3131

Residence Inn by Marriott is **located within walking distance of Alion Science and Technology** and is designed to make you feel at home for a day, a week, a month or more.



124 Womack Drive
Annapolis, MD USA 21401
(410) 571-0200 Toll-Free-Dial "1" & Then (800) 426-7866

The Hampton Inn is **located within walking distance of Alion Science and Technology** in a suburban setting within two miles of a major shopping mall and restaurants.

By Alion Science and Technology for the Joint Spectrum Center



Sheraton Barcelo Annapolis
173 Jennifer Road
Annapolis, MD USA 21401
(410) 266-3131

The beautifully renovated Sheraton Barcelo Hotel is an upscale full-service hotel and conference center in the business and shopping district.



Days Inn and Suites – Historic Annapolis
2451 Riva Road
Annapolis, MD USA 21401
(410) 224-4317

The Days Inn and Suites-Historic Annapolis is conveniently located within 2.5 miles of the historic downtown harbor.



Best Western Annapolis
2520 Riva Rd.
Annapolis, MD USA 21401
(410) 224-2800(410) Toll-Free-Dial "1" & Then (800) 638-5179

The Best Western Annapolis is conveniently located just three and a half miles from the world-renowned United States Naval Academy and beautiful historic downtown Annapolis.



Loews Annapolis Hotel
126 West St.
Annapolis, MD USA 21401
(410) 266-7777

Centrally located at the entrance to the historic district of Maryland's Colonial Seaport Capital, within walking distance of the U.S. Naval Academy.

By Alion Science and Technology for the Joint Spectrum Center



Marriott Annapolis Waterfront
80 Compromise Street
Annapolis, MD USA 21401
(410) 266-7555 Toll-Free-Dial "1" & Then (800) 228-9290

The Annapolis Waterfront Marriott is the only waterfront hotel in Annapolis and is located directly on the City Dock in the heart of the historic district.

CONTACT US

The JSC point-of-contact for JEET and GATE is Mr. Alan Rosner. He can be reached at

- DSN: 281-4957
- Commercial: (410) 293-4957
- Facsimile: DSN 281-2631
- Email: Alan.Rosner@jsc.mil

For technical assistance contact the JEET or GATE Help Lines at

- DSN: 281-2511, ext. 7573,
- Commercial: (410) 573-7573
- Email: GATE.HELP@jsc.mil
- Email: JEET.HELP@jsc.mil